

Southeast False Creek Integrated Design Process Workshops



Figure 1 The site model

Credit: Millenium

INTRODUCTION

The development of Vancouver's Southeast False Creek (SEFC) is a project of substantial scope that includes construction of the 2010 Olympic Village. With a tight schedule and high profile for the Olympic event, the City of Vancouver, in partnership with Canada Mortgage and Housing Corporation, hired consultants to organize and facilitate a kick-off Integrated Design Process (IDP) workshop to develop synergies and build consensus within the development team around the project vision and goals. The pre-design activity also allowed key concepts to be incorporated into all aspects of the design, construction and commissioning process. Participants generated a schedule of defined priorities and delegated tasks to move the project forward.

A Primer on Southeast False Creek (SEFC)

Almost 80 acres in size, the SEFC parcel of land was used for industrial purposes from the early 1800s. Activities included sawmills; foundries; shipbuilding; metalworking; salt distribution; warehousing and municipal storage. Fill from railway line construction and incinerator ash was also used to build up the shoreline.

The following SEFC Policy Statement, developed in 1999, highlights the future vision for this area:

"SEFC is envisioned as a community in which people live, work, play and learn in a neighbourhood that has been designed to maintain and balance the highest possible levels of social equity, livability, ecological health and economic prosperity, so as to support their choices to live in a sustainable manner."

The Guiding Principles for SEFC, as extracted from the Official Development Plan (ODP), include:

1. **Implementing Sustainability:** SEFC should promote the implementation of sustainable development principles in an urban setting.
2. **Stewardship of Ecosystem Health:** The SEFC plan should improve the health of the False Creek Basin and encourage resource conservation and waste reduction.
3. **Economic Viability and Vitality:** SEFC development should ensure viability without subsidy and encourage a vibrant and vital community.
4. **Social and Community Health:** SEFC should be a livable, complete community supporting social networks and enhance quality of life for all in the neighbourhood.

The SEFC sustainability goals and targets specify:

- minimum LEED Silver rating, registration and certification for all buildings;
- mandatory SEFC Green Building Strategy that includes energy efficiency, water management, and waste management as key principles;
- appropriate, affordable housing with flexibility to accommodate changing needs.

Vancouver 2010 Olympic Village

The focus of the IDP workshop is the 2010 Olympic Village. The area will be developed to deliver the first phase of the new SEFC community to accommodate an estimated 2,800 Olympic Winter Games athletes and officials. Permanent residents will be moving into the Olympic Village in mid-2010. This development is intended to be a model neighbourhood and a showcase of sustainable development. With a required completion date of October 2009, achieving sustainable design goals within a compressed schedule will be challenging.

The Integrated Design Process (IDP)

The Integrated Design Process (IDP) considers all major stakeholder needs. Key development components, which include site design/structure, buildings and their systems

and infrastructure, are considered as a holistic system from conception to construction. Therefore, collaboration between team members is necessary to achieve innovation by incorporating sustainable principles.

The SEFC Olympic Village Workshop

Over 80 participants were selected to participate in the workshop. They included:

- i) development team members;
- ii) municipal staff and;
- iii) sustainable development experts.

Eight teams were created with a balanced sample of representatives in each.

In general, the IDP Workshop objectives and actions were designed to:

1. Bring together a broad and collaborative team;
2. Build consensus on a well-defined vision, goals and objectives;
3. Encourage effective and open communication;
4. Propose decision-making tools and methods;
5. Begin the iterative ID process.

Interactive and team-building exercises were included in the workshop to:

1. Identify critical green building and site design goals and objectives to ensure that staff and design teams are reviewing projects under the same expectations.
2. Flag critical design issues or approval issues early on to streamline these challenges when they are encountered.
3. Streamline the design process at the front end by establishing common values for a consensus-built suite of design goals.

The workshop purpose was to articulate sustainability for this project by setting performance objectives, developing strategies and a process to carry them out. In general, a multi-moderator approach was used with active round-table discussion 70 per cent of time.

DAY 1 RESULTS

Day 1 established the framework and background for the workshop and focused participants on site-specific issues as noted in the summary table below. The agenda included:

- brief introduction to integrated design, systems thinking and sustainability;
- specific topics assigned to each of the eight tables/groups;
- each table investigated delegated topics;
- each group reported on common points and differences of opinion.

Table No. 1

Day 1 – Assigned Topics

1	Marketing mix / Feedback systems (measuring success) / Community Building
Key Strategies	Maximize views / Educate buyers about sustainability benefits / Market each site uniquely
2	Unit Configuration / Energy
Key Strategies	Natural ventilation / Atriums / No mechanical cooling
3	Building form: parking, structure and infrastructure (building for longevity/adaptability) / Waste management
Key Strategies	Shared underground parking / Easy-access recycling facilities / Rainwater as a heat sink
4	Energy: heat, power and connectivity / Passive issues: demand strategies, building mass and comfort
Key Strategies	Passive energy focus / Ambient temperature district energy system / Decentralized electrical distribution
5	Water / Habitat / Landscape / Soil / Human waste (sewerage)
Key Strategies	Net zero water use (rainwater for irrigation and toilet flushing) / Composting, 100 per cent landscaping
6	Energy: building systems / Comfort: light, air, general interior health / Water demand reduction / Cost effectiveness
Key Strategies	Optimal building orientation for energy efficiency / 100-mile material sourcing / Increased user control over resources
7	Development process and schedule
Key Strategies	Developed a schedule to accommodate mandatory approvals and deadlines / Discussed parking structure logistics
8	Urban design / Heritage / Social (place-making, community)
Key Strategies	Opportunities for First Nations / Public art that showcases sustainability / Strata covenants to ensure long-term sustainability

DAY 2 RESULTS

Day 2 refined the results from the previous day and completed the workshop deliverables. The agenda included:

- review material and reports from previous day to reaffirm context;
- form new breakout groups to discuss best practices to attain objectives;
- reporting by each group and follow-up discussion;
- group-wide objectives and integrated process developed to guide the project through the design phase.

Table No. 2

Day 2 – Assigned Topics

1	Energy, building mass, orientation / Urban design (single versus double loading corridor) / Olympics
Key Strategies	Assist access to view, sun and light / Passive energy priority / Clarify needs for Olympics early
2	District energy system / General indoor environment quality
Key Strategies	Investigate NEU revisit / Utilize passive design / Reduce load and demand
3	Waste stream / Water balancing / Future-proofing
Key Strategies	Mass excavation for one parkade / 100 per cent sustainable useful roof structure / Blackwater (sewage) recycling
4	Social issues / Financing, cost bundling / Community building
Key Strategies	De-couple parking from all units / Establish a SEFC Community Enterprise Fund / Create an umbrella neighbourhood organization

Research Highlight

Southeast False Creek Integrated Design Process Workshops

(Table No.2 continued)

Key Strategies	De-couple parking from all units / Establish a SEFC Community Enterprise Fund / Create an umbrella neighbourhood organization
5	Schedule / Key issues to be resolved immediately following IDP workshop
Key Strategies	Modest market housing, density bonus strategies / Flexibility in ODP regarding density, building envelopes, building heights, views, grid / Cooling strategies / Master Plan / Sub-Area 2A Plan / Urban Design Plan
6	What have we missed? / Integrated cost bundling concept / Development of feedback loop
Key Strategies	Climate change / Flexible housing options / Methods for measuring success and feedback

OUTCOMES AND NEXT STEPS

Objectives specified in Day 1 were reviewed, with tasks delegated and target completion dates specified. The core outcomes included:

- establishment of a core management team¹ to incorporate the goals and metrics;
- the commitment to develop an indicator feedback system;
- the commitment to develop a whole range of performance metrics for energy, water, materials and other areas;
- benchmark metrics aligning with LEED Canada Standards included including "Net-Zero" energy use, GHG neutrality and other parameters to maximize sustainability.

MOVING FORWARD

Since the IDP kick-off was completed, attention has been given to the issue list and prioritized schedule as follows:

Neighbourhood Energy Utility	High temperature chosen over ambient system
Built Form and Massing	Use and promote innovative designs that incorporate passive energy, solar opportunities, ventilation and daylighting. Work with City and ODP to reach consensus on building heights and views.
Timing and Process	IDP participants have clarified a plan to complete the numerous steps to rezone, manage permits and co-ordinate construction.
Social Sustainability Opportunities	Opportunities for middle income housing and non-market housing are being reviewed by key stakeholders.

IDP Follow-Up Session, June 16, 2006

CMHC helped to sponsor a follow-up session, which consisted of a smaller group of 50 participants consisting of similar members from the various teams from the IDP Kick-Off. After updates from the City team and the Developer's team on the progress of the previous session's action items, the participants worked on identifying solutions for unsolved issues and newly emerged challenges.

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Housing Research at CMHC

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¹ Including designers, development team and City of Vancouver staff

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